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January 20, 2015

Karl Rockeman, P.E.
Director
North Dakota Department of Health
Division of Water Qualilty
918 E. Divide Ave. 4th Floor
Bismarck, ND 58501

RE: Surface Water Sampling Plan
Blacktail Creek Response
Williams County, North Dakota
Meadowlark Midstream Company, LLC.
5831 123rd Drive NW
Epping, ND 58843
Stantec Project No.: 212205194.205

Dear Mr. Rockeman:

This Surface Water Sampling Plan (Surface Water Plan) has been prepared by Stantec Consulting Services Inc. (Stantec) on behalf of Meadowlark Midstream Company, LLC (Meadowlark). This Surface Water Plan has been prepared as specified in Section 4.1 of the January 16, 2015 Incident Action Plan (IAP).

Proposed surface sampling locations, analytes, frequency, and rationale are presented on Table 1. Surface sample locations are presented on Figure 1. Surface water samples will be collected in accordance with the Surface Water Sampling Standard Operating Procedure (SOP) (ERPA-010). Surface water samples will be handled, packaged, and shipped in accordance with the Sampling and Analysis Plan (SAP). All samples will be handled under chain-of-custody procedures as specified in the SAP. QA/QC procedures and data quality objectives are specified in the SAP. QC samples (e.g., trip blanks, duplicates, etc.) will be collected at the frequency specified in the SAP.

The attached schedule provides for daily monitoring, and weekly monitoring. The daily monitoring for chlorides will be conducted using field chloride test strips and field measurements of specific conductivity using a YSI 556. Weekly chloride samples will be submitted to the laboratory for analysis by USEPA Method 9056. Both daily and weekly samples for volatile organic compounds (VOCs) will be submitted to the laboratory for analysis by USEPA Method 8260.

Daily monitoring according to this schedule will be initiated on January 21, 2015 and terminate on February 5, 2015. The first weekly monitoring event will be conducted on January 22, 2015. Monitoring on this schedule will continue until February 5, 2015 and include a total of three weekly monitoring events, unless modified with approval of the NDDH. The results of the monitoring program will be evaluated when received from the laboratory. Modifications to this sampling plan may be proposed based on the results of sampling.

If you have any questions or require additional information please contact Susan Hall at (317) 294-7292, or Jim Kerr of Stantec at (303) 807-4702.

Sincerely,

STANTEC CONSULTING SERVICES, INC.

Prepared by:

John W. McInnes, LPG
Managing Principal Geologist

Reviewed by:

Susan M. Hall
Environmental Assessment Unit Lead

Approved by:

James M. Kerr, Jr., LPG
U.S. ES Quality Lead

Attachments
Surface Water Sampling Schedule
Surface Water Sampling Location Map – 1
Surface Water Sampling Location Map – 2
Surface Water Sampling Standard Operating Procedure

Cc: Andrew Parisi, Summit Midstream
Megan Davis, Summit Midstream
Brock Degeyter, Summit Midstream
Colin Harris, Bryan Cave, LLP
Bethany Lucente, Stantec Consulting Services
Doug Stewart, Stantec Consulting Services

Blacktail Creek
Meadowlark Midstream Company, LLC
Surface Water Sampling Plan

Sample Location	Water Body	Daily		Weekly		Rationale
		Chloride [1]	VOCs SW-846 method 8260	Chloride Method9056_O RGFM_28D	VOCs SW-846 method 8260	
BC_100	Blacktail Creek			X	X	Upstream (background)
BC_101	Blacktail Creek		X			Blacktail Creek Up-stream of Route 85
BC_103	Blacktail Creek	X	X	X		Blacktail Creek Up-stream of Route 85
BC_106	Blacktail Creek	X	X	X		Blacktail Creek Up-stream of Little Muddy River
BC_107	Little Muddy River			X		Little Muddy River Upstream of Blacktail Creek
BC_108	Little Muddy River	X		X	X	Little Muddy River Upstream of Blacktail Creek Confluence
BC_108.1	Little Muddy River	X		X	X	Little Muddy River Immediately Down-stream of Blacktail Creek Confluence
BC_109	Little Muddy River	X		X	X	Little Muddy River 1.1 Down-stream of Blacktail Creek
BC_110	Little Muddy River			X		Little Muddy River Down-stream of Blacktail Creek
BC_112	Little Muddy River			X		Little Muddy River Down-stream of Blacktail Creek
BC_114	Little Muddy River	X		X		Little Muddy River Down-stream of Blacktail Creek
BC_115	Little Muddy River	X		X		Little Muddy River Down-stream of Blacktail Creek
BC_116	Little Muddy River	X		X		Little Muddy River Down-stream of Blacktail Creek
BC_117	Little Muddy River	X		X		Little Muddy River Down-stream of Blacktail Creek
BC_118	Little Muddy River	X		X		Little Muddy River Down-stream of Blacktail Creek
BC_119	Little Muddy River	X		X		Little Muddy River Down-stream of Blacktail Creek
BC_120	Little Muddy River	X		X		Down-stream of BC_119 location to be determined.
BC_200	Blacktail Creek	X	X	X		Blacktail Creek Immedialy Up-Stream of State Route 85

Note:
1 - Field Screening using Chloride Test Strip and Field Conductivity Reading using a YSI 556

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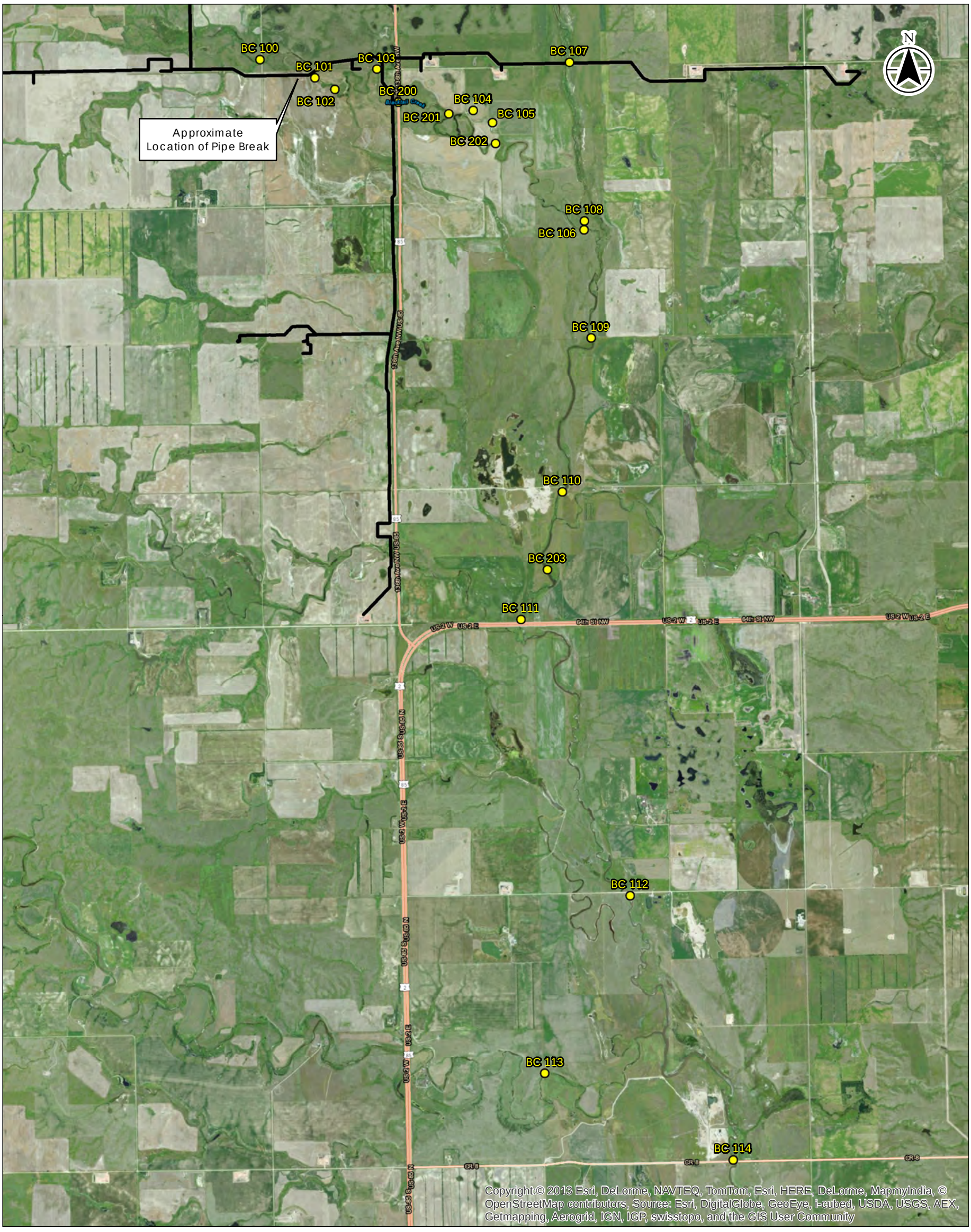

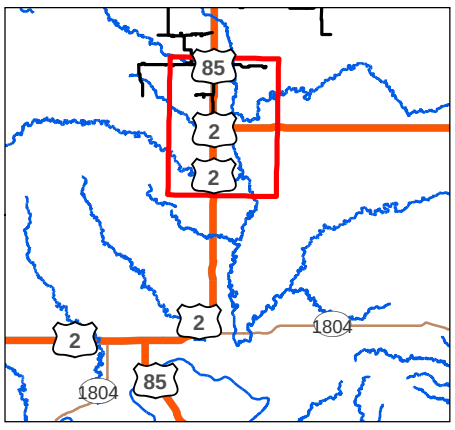

Legend

- Sample Location
- Existing Pipeline

0 0.75 1.5 Miles

1:47,520 (At Original document size of 11x17)

Stantec

Project Location
Williams County, North Dakota

212205194
Prepared by KWH on 2015-01-18
Technical Review by TR on 2015-01-18
Independent Review by SH on 2015-01-18

Client/Project
Meadowlark Midstream Company, LLC
Blacktail Creek

Figure No.
1

Title
Surface Water Sampling Plan Map

Notes
1. Coordinate System: NAD83 UTM zone 13N
2. 2014 National Agriculture Imagery Program (NAIP) aerial orthoimagery provided by USDA's Farm Service Agency
3. Existing Pipeline Sytem provided by Summit Midstream

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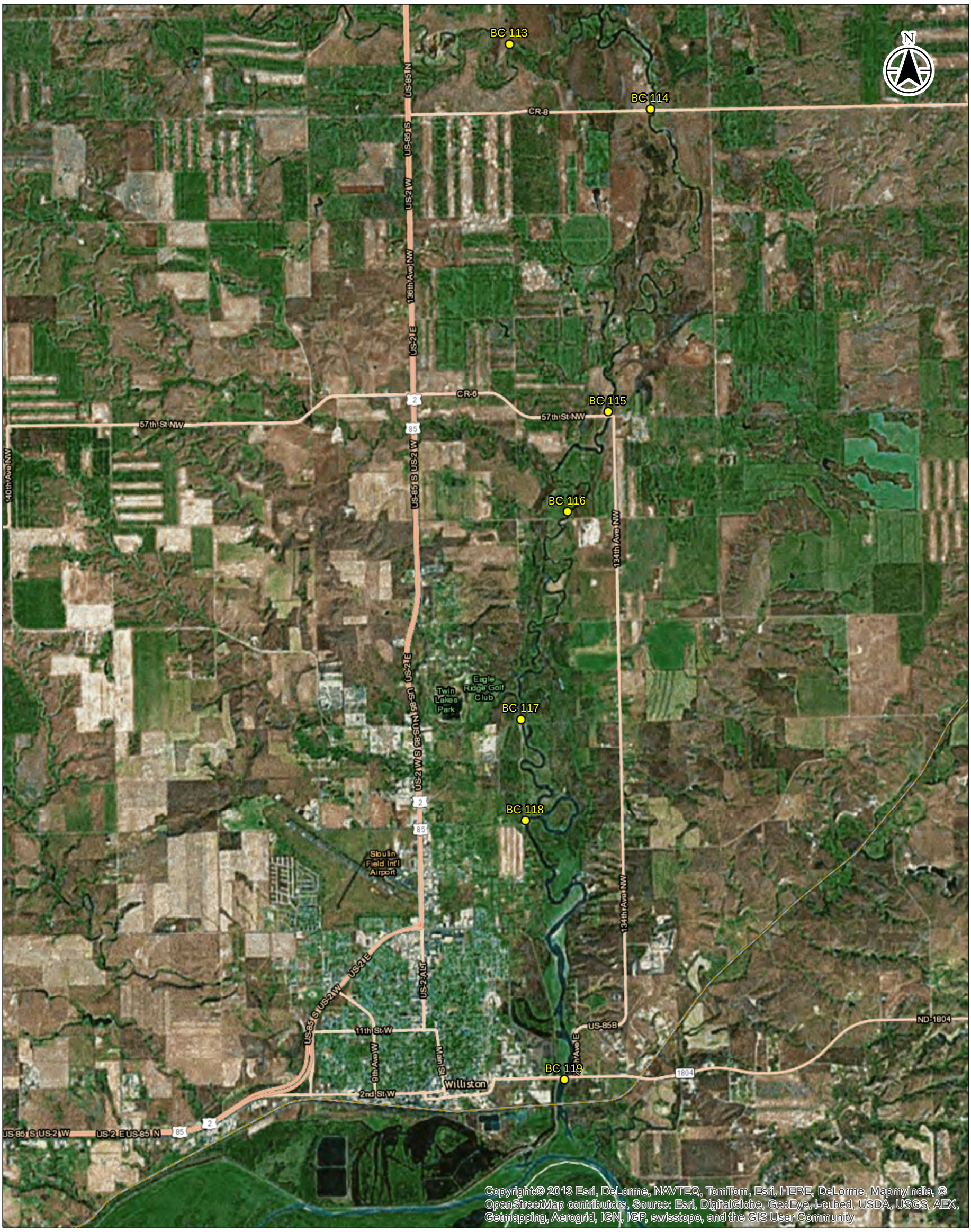

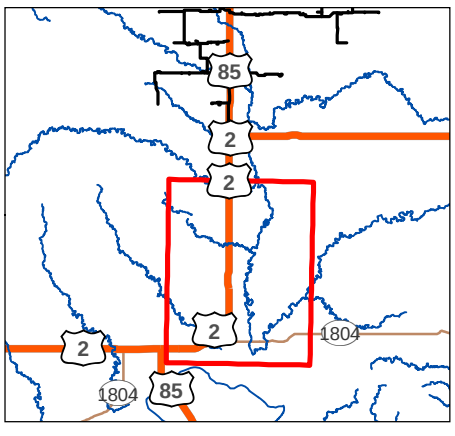

Legend

- Sample Location
- Existing Pipeline

0 1 2 Miles

1:63,360 (At Original document size of 11x17)

Stantec

Project Location
Williams County, North Dakota

212205194
Prepared by KWH on 2015-01-18
Technical Review by TR on 2015-01-18
Independent Review by SH on 2015-01-18

Client/Project
Meadowlark Midstream Company, LLC
Blacktail Creek

Figure No.
2

Title
Incident Sampling Plan Map

Notes
1. Coordinate System: NAD83 UTM zone 13N
2. 2014 National Agriculture Imagery Program (NAIP) aerial orthoimagery provided by USDA's Farm Service Agency
3. Existing Pipeline Sytem provided by Summit Midstream

1.0 PURPOSE & APPLICABILITY

The purpose of this document is to define the standard operating procedure (SOP) for the collection of surface water grab samples for laboratory analysis. The ultimate goal of the sampling program is to obtain grab samples that meet acceptable standards of accuracy, precision, comparability, representativeness and completeness. All steps that could affect tracking, documentation, or integrity of samples have been explained in sufficient detail to allow different sampling personnel to collect samples that are equally reliable and consistent.

This procedure provides descriptions of equipment, field procedures, sample containers, decontamination, documentation, storage, holding times, and field Quality Assurance/Quality Control (QA/QC) procedures necessary to collect surface water samples.

This procedure may apply to all surface water grab sampling by Stantec personnel or their subcontractors.

While the Quality Assurance Project Plan (QAPP) is intended to be strictly followed, it must be recognized that field conditions may force some modifications to the SOP. Any modification to the SOP shall be approved by the Project Manager or Task Leader in advance. Where SOP modification is planned sufficiently in advance, regulatory agency concurrence will be sought prior to conducting the specific activity. When direct contact with regulatory agency staff is not possible, or unscheduled delays will result, such as during field activities, regulatory agency will be notified of deviations from the SOPs, in writing, as soon as possible after the occurrence.

2.0 DEFINITIONS

GPS	Global Positioning System
HASP	Health and Safety Plan
OSHA	Occupational Safety & Health Administration
PFD	Personal Flotation Device
PPE	Personal Protective Equipment
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
SOP	Standard Operating Procedure
USGS	United States Geological Survey
UTM	Universal Transverse Mercator Coordination System
VOC	Volatile Organic Compound

3.0 HEALTH AND SAFETY CONSIDERATIONS

Refer to the site-specific Health and Safety Plan (HASP) for health and safety considerations applicable to surface water sampling.

Consideration of Health and Safety risks prior to performing this work is paramount. This risk review can be performed by making our generic Job Safety Analysis site-

specific in our site-specific HASP. Of course, there are many items that need to be considered. The following is just a short list of the items. Careful consideration of these items by the project team is essential, and the ultimate responsibility of the project manager.

- Slips, trips, and falls and uneven terrain are likely to be encountered while accessing surface water or wading in surface water. Felt-soled boots may be appropriate.

- Drowning is a risk near any surface water and a Personal Flotation Device (PFD) should be worn at all times when working near any type of surface water.

- Water velocity needs to be determined if personnel will be wading into the surface water. Flowing water in which personnel may safely wade is generally defined by the United States Geological Survey (USGS) by multiplying the depth of the water (ft) by the velocity (ft/sec) and ensuring the product is less than 10. The stature and weight of the field personnel, in addition to the conditions of the streambed, should also be considered. Safety lines may also be appropriate depending on the conditions.

- Ice thickness should be determined before accessing frozen surface water.

- Personal protective equipment (PPE) including PFD, high visibility traffic vest, gloves, hip boots or chest waders, and other appropriate clothing.

- Indications of heat and cold stress should be discussed with field personnel and action items identified.

- A visual survey of biological hazards such as insects and spiders should be performed. Appropriate clothing is required such as long-sleeved shirts and long pants.

- Possible blood borne pathogens should be discussed. Some of our sites may have syringes and other drug paraphernalia that must be avoided.

- Chemical exposure on sites with open contamination. Respiratory protection may be necessary. Proper selection of respiratory protection is essential and an understanding of its limitation (i.e., negative pressure respiratory protection does not supply oxygen in an oxygen-deficient atmosphere). Staff should familiarize themselves with exposure limits for contaminants of concern.

- Use of air monitoring instrumentation will not likely be necessary. We must be careful to make sure that our instrumentation is appropriate for the airborne contaminants of interest and that our staff understands the limitations of the instrumentation. Staff must also understand and perform calibration including zeroing with zero gas cylinders and appropriate other calibration gases.

- Decontamination of equipment and personnel must be properly designed and constructed to be sure that contamination is kept within the boundaries of the exclusion zone.

- Noise and proper use of hearing protection devices such as ear plugs and/or muffs, if required.

- Emergency action plan must be carefully coordinated in advance between Stantec, our subcontractors, the client and emergency responders.

- Ergonomics should be considered when setting up equipment. Ensure that staff does not lift more than 50 lbs alone or over extend during sampling.

All of these risks and others must be discussed with our subcontractors, if applicable, and clients to be sure they are properly addressed. Once the issues have been addressed at a project management level, they must be communicated to the staff performing the work. Details of procedures, instrument measurements, and other activities must be recorded in the field log and/or on data collection forms.

4.0 QUALITY ASSURANCE PLANNING CONSIDERATIONS

Sampling shall be done by personnel familiar with the common sources of random and systematic error so intelligent decisions can be made in the field. Some of the common phenomena which may degrade sample quality are listed below:

- **Volatilization.** Volatilization occurs when the sample is in contact with air for an extended time. Typically volatilization occurs if the sample undergoes excessive agitation during sampling or if air pockets exist at the top of the water container. Limiting agitation during sampling, filling sample containers in order of volatility, and tight capping of bottles immediately after filling will minimize these errors.

- **Adsorption/desorption.** This is the gain or loss of chemicals through exchange across surfaces. Adsorption may occur when the sample comes in contact with large surface areas such as the sampling container. Thorough decontamination of sample collection containers/monitoring equipment probes along with expedient transfer from the sample container to the labrotory container minimizes sorption effects.

- **Chemical reaction.** Dissolved chemical constituents may change due to reactions such as oxidation, hydrolysis, precipitation, etc. Proper preservation and adherence to holding times minimize these reactions.

- **Biodegradation.** Surface waters contain bacteria, some of which may be capable of altering the composition of contaminants. Proper preservation and adherence to holding time will reduce this effect.

- **Sample contamination.** Sample contamination is the most common source of errors and can result from several factors, including incomplete decontamination,

contact with other samples, and contact with the atmosphere. Careful attention to decontamination, handling, and container sealing minimizes sample contamination.

5.0 RESPONSIBILITIES

The Project Manager or Task Leader will be responsible for assigning project staff to complete water surface sampling activities. The Task Leader will also be responsible for assuring that this and any other appropriate procedures are followed by all project personnel.

The project staff assigned to the surface water sampling task will be responsible for completing their tasks according to this and other appropriate procedures. All staff will be responsible for reporting deviations from the procedure or nonconformance to the Task Leader, Project Manager, or Project QA/QC Officer.

6.0 TRAINING AND QUALIFICATIONS

Only qualified personnel shall be allowed to perform surface water sampling. At a minimum, Stantec employees qualified to perform water sampling will be required to have:

- Read this SOP.
- Indicated to the Task Leader that all procedures contained in this SOP are understood.
- Completed the OSHA 40-hour training course and/or 8-hour refresher course, as appropriate.
- Coordinated any proposed sampling activites with the laborotory to ensure proper sampling procedures.
- Previously performed water sampling in a manner generally consistent with the procedures described in this SOP.

Stantec employees who do not have previous experience sampling surface water will be trained on site by a qualified Stantec employee and supervised directly by that employee until they have demonstrated an ability to perform the procedures.

The Project Manager shall document personnel qualifications related to this procedure in the project QA files.

7.0 REQUIRED MATERIALS

Dedicated sampling equipment will be used whenever possible and stored at a designated location on site. Sample bottles for volatile and semivolatile organic compounds, general mineral, and metals samples will be obtained from the analytical

laboratory. Extra sample containers will be obtained in case of breakage or other problems. Trip blanks will also be obtained from the analytical laboratory.

Typical surface water sampling equipment list:

- Access equipment such as waders or small boat.
- Sampler, selected on the basis of material constuction, target analyses, scope and environmental conditons.
- Sample processing equipment such as splitters or filtration systems, if necessary.
- Field Instruments (GPS, pH meter, YSI meter, etc.).
- PPE, including nitrile or powderless surgical gloves (or other material depending upon the nature of the chemicals encountered) and safety glasses. Tough work gloves may also be required for moving around equipment before or after the sampling itself. Other PPE include PFD, traffic vest, steel-toed safety shoes, hearing protection devices, long-sleeved shirt and long pants, and possibly a respirator if there is volatilization of chemicals, etc. Hip boots, chest waders, felt-soled boots, or tagline may also be applicable if wading is required;
- Auger, if collecting a sample through the ice.
- Water sample collection data forms.
- Data recording sheets/electronic storage device.
- Bound field notebook and pen (indelibile ink).
- Sample bottles with appropiate preservative, chain-of-custody forms, labels.
- Cooler with packing materials (bubble wrap, foam sleeves).
- Garbage bags for cooler liner and ziplock bags.
- Packing tape and shipping labels.
- Ice or frozen ice packs.

Proposed equipment for sample filtration, if filtration is needed:

- Two (2) clean containers, approximately one (1) liter in size.
- Organic-free deionized water.
- One Peristaltic filtration pump.

- In-line plate filter or capsule filter.
- Filter membranes--0.45 µ pore size for filter plate.
- A 1:1 nitric acid/purified water solution or 0.1 normal HCL for decontamination of filtering glassware.

Equipment used during decontamination:

- Alconox detergent (or equivalent non-phosphate detergent) or other solution that will neutralize the chemicals encountered.
- Organic-free deionized water or distilled water.
- Solvents, if required.
- Basins, brushes, wash bottles, paper towels, storage bags, drop cloths.
- PPE, including nitrile (or other material depending upon the nature of the chemicals we expect to encounter) or powderless surgical gloves and safety glasses/goggles. Tough work gloves may also be required for moving around equipment before or after the sampling itself. Other PPE include traffic vest, steel-toed safety shoes, hearing protection devices, long-sleeved shirt and long pants, and possibly a respirator if there is volatilization of chemicals, etc. An eyewash bottle or station, safety shower, and spill kit may be necessary if chemicals are used.

8.0 METHODS

This section describes the sequence of events to follow for sample collection in the field.

8.1 Sampling Location Selection

Prior to sample collection, field personnel must ensure the collected samples will be representative of the aqueous system being investigated. A representative sample typifies in time and space the portion of the aqueous system delineated by the scope and objectives of the study. Personnel must determine the number of sampling points to adequately represent the aqueous system's physical properties and distribution of chemical constituents or biological communities. When selecting surface water sampling sites:

- Consider the study objectives, types of data needed, equipment needs, and sampling methods.
- Consider locations with historical information.
- Consider physical characteristics of the area such as size and shape, land use, tributary and runoff characteristics, geology, point and nonpoint contamination

sources, hydraulic conditions, climate, water depth, volume, and fluvial-sediment transport characteristics.

- Collect water quality data (dissolved oxygen, pH, temperature, etc.) to aid in selecting the appropriate sampling depth.

8.1.1 Flowing Water Sites

Flowing water can refer to streams (fast, slow, intermittent, ephemeral, or perennial), canals, ditches, flumes (of all sizes and shapes), or any other surface water feature in which water moves unidirectionally. All or part of reservoirs and estuaries that flow unidirectionally are considered flowing water. Flowing water sampling sites are optimally located:

- At or near gauging stations to obtain surface water discharge data for determining constituent concentration relations (discharge should be measured at time of sampling if gauging station is not near the sampling site).
- In straight reaches having uniform flow and stable bottom contour where constituents are well mixed along the cross-section.
- At a distance above and below surface water confluences or point sources of contamination to avoid sampling a cross-section where flows are poorly mixed or not unidirectional (unless the point source is the subject of the study).
- Upstream of bridges or other structures to avoid contamination from the structure or roadway.
- At a location where samples can be collected at any water stage throughout the study period.
- At a location where other data are collected (suspended sediment, bedload, bottom material, or biological material).

8.1.2 Still Water Sites

Still water sites refer to all sizes and shapes of lakes, reservoirs, ponds, swamps, marshes, riverine backwaters, or any other surface water body that does not flow unidirectionally. Still water sampling sites are optimally located:

- Away from structures such as harbors, boat ramps, piers, fuel docks, and houseboats (unless the structures are part of the study).
- At locations with historical data.

8.2 Equipment Selection

When selecting the appropriate water sampling equipment, consider the following:

- The mechanical constraints of the equipment to perform under the environmental conditions (flow, temperature, etc).

- The ability of the equipment to obtain samples representative of the environmental conditions (size of sample, material).

- The compatibility of the sample and the equipment material in order to maintain sample integrity (equipment material with leaching and/or sorptive properties).

Common types of samplers include:

- Isokinetic depth integrating samplers: Accumulate a continuous water sample from a vertical section of the water column at a constant rate (independent of source velocity change) while transiting the vertical cross-section at a uniform rate.

- Nonisokinetic samplers: Sample enters the device at a velocity which differs from the ambient velocity (i.e., - open mouth samplers, Kemmerer sampler, etc.).

8.3 Equipment Decontamination

The decontamination protocol is essential to the quality of the sampling procedure and important to ensuring that chemicals remain at the project site and are not tracked or carried elsewhere. The decontamination procedure should be designed and constructed to work on the chemicals of interest and contain the rinsate and solids within the contamination reduction zone.

Before sampling begins, any non-dedicated or non-disposable equipment, probes, pumps, and pump hoses shall be decontaminated to remove contaminants, manufacturing residues, dust, and other foreign substances.

Decontamination will be performed on all sampling equipment that may contact potentially contaminated water, including water level probes, fiberglass tapes, etc. Clean nitrile gloves (or other appropriate material depending upon the chemicals involved) or powderless surgical gloves are to be worn during decontamination.

Each piece of sampling equipment will also be decontaminated with the appropriate solvent between each sample. The decontamination procedure for most equipment will be as follows:

- Disassemble sampling equipment, if applicable.

- Inspect equipment for stains, cuts, abrasions, and replace any necessary parts.

- Wash equipment in Alconox (or equivalent non-phosphate soap) and water solution, or appropriate solvent, using a brush or clean cloth to ensure removal of all contaminants.

- Rinse equipment in fresh tap water. Re-rinse with de-ionized water or distilled water.

- Dry equipment with paper towel and place in clean place, if appropriate.

The effectiveness of these decontamination procedures will be verified by QA/QC protocols, including equipment blanks, duplicates, and spikes.

8.4 Obtain Water Samples

The following general sampling procedure is to be used while collecting surface water samples:

- Assemble (if necessary) decontaminated sampling equipment;

- Don clean nitrile or powderless surgical gloves immediately before obtaining sample;

- Label sample containers;

- Record environmental conditions at the sampling point and record location with a GPS;

- Obtain water sample by using the appropriate sampling equipment for the scope of the activity (face the sampling apparatus upstream);

- Transfer sample water directly into pre-preserved sample bottles provided by the laboratory, maintaining a slow linear flow with as little aeration as possible. The individual sample bottles will be filled and immediately capped in the order given below or as required by the analytical protocol.

  - ❖ Volatile organic compounds (VOCs)
  - ❖ Semivolatile organic compounds
  - ❖ Priority Pollutant Metals
  - ❖ General Minerals

- After each sample is collected, place the bottles in self-sealing plastic or bubble bags, seal the bags, and immediately place the bags in a chilled cooler with ice or frozen ice packs.

- Record sample number, time/date of sampling, location, project number, method, weather, site conditions, and sampler on the Sample Collection Data Form.

- Complete chain-of-custody form for transportation of samples to lab.

- Hand deliver or ship samples to the lab on the same day they are collected, or as soon afterwards as possible.

8.5 Sample Filtration

The following filtering procedures shall be used on samples collected for filtered metal and general mineral analyses. Clean nitrile or powderless surgical gloves will be worn during this procedure.

- Select the appropriate capsule filter or place a new 0.45 filter membrane on the filter plate and assemble the (decontaminated) filter holder.
- Transfer information from sample label on the sample collected in the field (these samples will have been collected in sample bottles without preservatives) to new sample bottle (containing preservative, if appropriate).
- Place filtration tube in the sample bottle containing the unfiltered solution.
- Place new sample bottle (containing necessary preservatives) under filtering unit.
- Turn on pump and filter sample at less than 25 psi.
- Store filtered samples in chilled cooler with ice or frozen ice packs.
- Remove and dispose of used filter membrane.
- Rinse filtration plate and all parts of filtering apparatus that contacted the water sample with deionized water.
- Decontaminate any filtering glassware in an Alconox (or equivalent) solution, followed by rinses with tap water, a 1:1 nitric acid/purified water solution or 0.1 normal HCl, and finally organic-free deionized water.

8.6 Decontamination Methods

The following steps will be used to decontaminate sampling equipment:

- Ensure that the decontamination process has been carefully designed so that the solutions used are appropriate for the chemicals of concern.
- Personnel will don appropriate safety equipment to reduce personal exposure.
- Equipment that will not be damaged by water will be placed in a wash tub containing an Alconox™ (or equivalent) solution and scrubbed with a brush or clean cloth. Equipment will then be rinsed in a second wash tub.
- Equipment that may be damaged by water will be carefully wiped clean using a sponge and detergent water and wiped with organic-free deionized water. Care will be taken to prevent any equipment damage.

Following decontamination, equipment will be placed in a clean area or on clean plastic

sheeting to prevent possible contamination. Single use equipment and consumables will be discarded in an appropriate manner.

8.7 Sample Containers, Storage, and Holding Times

Refer to the Project SAP for project specific instructions on proper containers, storage of samples and allowable holding times.

9.0 QUALITY CONTROL CHECKS AND ACCEPTANCE CRITERIA

Refer to the Quality Assurance Project Plan for specific quality control checks and acceptance criteria.

Outline quality control checking procedures, including frequency requirements and acceptance criteria. Acceptance criteria may take the form of an illustration such as a chart of acceptable results with tolerances, or other appropriate forms.

When collecting any required equipment blanks, ensure the appropriate water is used and that the water was not exposed to vehicle exhaust, cleaning fluids, or other solvents.

10.0 DOCUMENTATION

A record will be maintained during the sampling event will contain at a minimum:

- Project number.
- Station number.
- Date/time.
- GPS waypoint of sample site location in UTM.
- Site photographs.
- Crew members.
- Sampling method.
- Weather conditions.
- Instrumentation calibration log.
- Site conditions (i.e., nearby construction activity, discharge to watercourse from industry or agriculture, debris blocking channel, bank instability).

Sampling information in the field book should contain, at a minimum, the following:

- Sample name, location, time, sampler, analysis.
- Blind duplicates shall be noted on field notes (not chain-of-custody).
- Time of sample collection.
- Number of samples collected.
- Sample identification numbers.
- Preservation and storage of samples.
- Filtration performed, if any.
- Record of any QC samples from site.
- Any irregularities or problems that may have a bearing on sampling quality.
- Type of sampling equipment.
- Sampling procedure.
- Field observations.

In addition, proper documentation will include observance of the chain-of-custody procedures as described in the Project QAPP and SAP.

ACCEPTANCE

Author/Originator

Peer Reviewer

Senior Reviewer

Environment Practice QA/QC Manager